

App. Serial No.: 10/092,933
Atty. Docket No.: 0003-029

IN THE CLAIMS

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Please amend the claims as follows:

1. (currently amended) A ventilation flow control unit ~~according to Claim 14, further~~ comprising:

a plenum;

a flow controller mounted to said plenum;

an isolation valve fixed to said plenum to selectively block the flow of air between
said plenum and said flow controller; and

a flow sensor mounted to said plenum; and

wherein said ventilation flow control unit can be installed as a single unit.

2. (original) A ventilation flow control unit according to Claim 1, wherein said sensor is mounted in a duct section fixed between said plenum and said flow controller.

3. (canceled)

4. (previously presented) A ventilation flow control unit according to Claim 1, wherein the leakage of said isolation valve is no more than one percent.

5. (previously presented) A ventilation flow control unit according to Claim 1, wherein said isolation valve comprises a damper.

6. (original) A ventilation flow control unit according to Claim 5, wherein said damper is a fixed blade damper.

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7. (currently amended) A ventilation flow control unit comprising:

- a plenum;
 - a flow controller mounted to said plenum;
 - a flow sensor mounted to said plenum;
 - a thermal coil fixed to said plenum, for affecting the temperature of air passing through said ventilation flow control unit; and
 - an automatic valve connected with at least one fluid line of said thermal coil; and
 - ~~a protection bracket mounted to protect said automatic valve from damage during transportation and installation of said ventilation flow control unit~~
- wherein said ventilation flow control unit can be installed as a single unit.

8. (original) A ventilation flow control unit according to Claim 7, wherein said thermal coil is mounted to an open end of said plenum opposite said flow controller.

9. (previously presented) A ventilation flow control unit according to Claim 7, wherein said at least one fluid line of said thermal coil is mounted to said plenum.

Claims 10-11 (canceled)

12. (currently amended) A ventilation flow control unit according to ~~Claim 7~~ Claim 48, wherein said protection bracket includes:

- a base defining an opening to facilitate the passage of a valve stem;
- a first riser extending from a first edge of said base; and
- a second riser extending from a second edge of said base opposite said first edge.

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13. (currently amended) A ventilation flow control unit according to Claim 7, wherein said plenum is insulated comprising:

~~an insulated plenum;~~
~~a flow controller mounted to said plenum;~~
~~a flow sensor mounted to said plenum;~~
~~a thermal coil fixed to said plenum, for affecting the temperature of air passing through said ventilation flow control unit; and~~
~~an automatic valve connected with at least one fluid line of said thermal coil.~~

14. (currently amended) A ventilation flow control unit comprising:

a plenum;
a flow controller mounted to said plenum;
a flow sensor mounted to said plenum; and
an electrical disconnect; and
wherein said ventilation flow control unit can be installed as a single unit.

15. (original) A ventilation flow control unit according to Claim 14, wherein said electrical disconnect is mounted on said plenum.

16. (original) A ventilation flow control unit according to Claim 14, further comprising a voltage converter electrically coupled to receive electrical power from said disconnect, for converting a first voltage received from said disconnect to a second lower voltage.

17. (original) A ventilation flow control unit according to Claim 16, wherein said converter provides low voltage to said flow controller.

18. (original) A ventilation flow control unit according to Claim 17 wherein:
said flow control unit further includes a thermal coil with at least one automatic fluid valve; and
said converter provides low voltage to said automatic fluid valve.

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19. (original) A ventilation flow control unit according to Claim 16 wherein:

said flow control unit further includes a thermal coil with at least one automatic fluid valve; and

said converter provides low voltage to said automatic fluid valve.

Claims 20-21 (canceled)

22. (currently amended) A method of installing a ventilation flow control unit, comprising:

assembling a flow control unit by mounting a flow controller to a duct, mounting a flow sensor to said duct, and mounting a thermal coil to said duct including securing at least one fluid line of said thermal coil to said duct and mounting an automatic valve in said fluid line ~~including mounting a protective bracket around said automatic valve~~; and

installing said assembled flow control unit in a ventilation system.

Claims 23-25 (canceled)

26. (previously presented) A method of installing a ventilation flow control unit, comprising:

assembling a flow control unit by mounting a flow controller to a duct, mounting a flow sensor to said duct, and mounting an electrical disconnect to said duct; and installing said assembled flow control unit in a ventilation system.

27. (original) A method of installing a ventilation flow control unit according to Claim 26, wherein said step of assembling said flow control unit further includes mounting an electrical converter to said duct for converting a voltage from said electrical disconnect to a second lower voltage.

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28. (currently amended) A method of installing a ventilation flow control unit comprising:

assembling a flow control unit by mounting a flow controller to a duct, mounting a flow sensor to said duct, mounting a thermal coil to said duct, ~~mounting an electrical disconnect to said duct,~~ and mounting an isolation valve to said duct, said isolation valve selectively blocking the flow of air between said duct and said flow controller; and

installing said assembled flow control unit in a ventilation system.

29. (canceled)

30. (currently amended) A method of installing a ventilation flow control unit according to ~~Claim 28~~ Claim 58, wherein said step of assembling said flow control unit includes mounting an electrical converter to said duct.

31. (original) A method of installing a ventilation flow control unit according to Claim 30, wherein said step of assembling said flow control unit includes electrically coupling said flow controller to said electrical converter.

32. (currently amended) A method of installing a ventilation flow control unit according to Claim 30, wherein said step of assembling said flow control unit includes:

mounting an automatic valve to a fluid line of said thermal coil to control the flow of fluid through said fluid coil; and

electrically coupling said automatic valve to said electrical converter.

33. (original) A method of installing a ventilation flow control unit according to Claim 32, wherein said step of assembling said flow control unit includes electrically coupling said flow controller to said electrical converter.

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34. (original) A ventilation flow control system comprising:
a first flow control unit for controlling the flow of air into a room, said first flow control unit including a duct, a flow controller mounted to said duct, and a sensor mounted to said duct;
a second flow control unit for controlling the flow of air out of said room, said second flow control unit including a duct, a flow controller mounted to said duct, and a sensor mounted to said duct; and
a control unit for receiving feedback signals from said sensors and providing control signals to said flow controllers.
35. (original) A ventilation flow control system according to Claim 34, wherein said first flow control unit further includes a thermal coil mounted to said duct of said first flow control unit.
36. (original) A ventilation flow control system according to Claim 34, wherein at least one of said first and second flow control units includes an isolation valve.
37. (previously presented) A ventilation flow control system according to Claim 34, wherein both of said first and second flow control units include an isolation valve.
38. (original) A ventilation flow control system according to Claim 34, wherein at least one of said first and second flow control units include an electrical disconnect.
39. (original) A ventilation flow control system according to Claim 38, wherein said at least one of said first and second flow control units further includes an electrical converter for converting a voltage from said electrical disconnect to a lower voltage.
40. (original) A ventilation flow control system according to Claim 34, further comprising a third flow control unit for controlling the flow of air out of said room, said third flow control unit including a duct, a flow controller mounted to said duct, and a sensor mounted to said duct.

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41. (original) A ventilation flow control system according to Claim 40, wherein said control unit receives feedback signals from and provides control signals to said third flow control unit.

42. (original) A ventilation flow control system according to Claim 41, wherein:
said first flow control unit is mounted in an air supply duct;
said second flow controller is mounted in an air return duct; and
said third flow control unit is mounted in an exhaust duct.

Claims 43-44 (canceled)

45. (previously presented) A method of installing a ventilation flow control unit according to Claim 22, wherein said step of assembling said flow control unit further includes mounting an isolation valve to said duct to selectively block the flow of air between said duct and said flow controller.

46. (new) A ventilation flow control unit according to Claim 1, wherein said plenum, said flow controller, and said isolation valve are arranged in a straight-through configuration such that air can flow generally straight through said ventilation flow control unit.

47. (new) A ventilation flow control unit according to Claim 1, further comprising a flow straightener mounted to said plenum adjacent said flow sensor, said flow straightener reducing the turbulence of air flowing past said flow sensor.

48. (new) A ventilation flow control unit according to Claim 7, further comprising a protection bracket mounted to protect said automatic valve from damage during transportation and installation of said ventilation flow control unit.

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49. (new) A ventilation flow control unit according to Claim 7, wherein said plenum, said flow controller, and said thermal coil are arranged in a straight-through configuration such that air can flow generally straight through said ventilation flow control unit.

50. (new) A ventilation flow control unit according to Claim 7, further comprising a flow straightener mounted to said plenum adjacent said flow sensor, said flow straightener reducing the turbulence of air flowing past said flow sensor.

51. (new) A ventilation flow control unit according to Claim 18, wherein said plenum, said flow controller, and said thermal coil are arranged in a straight-through configuration such that air can flow generally straight through said ventilation flow control unit.

52. (new) A ventilation flow control unit according to Claim 14, further comprising a flow straightener mounted to said plenum adjacent said flow sensor, said flow straightener reducing the turbulence of air flowing past said flow sensor.

53. (new) A method of installing a ventilation flow control unit comprising:
assembling a flow control unit by mounting a flow controller to a duct, mounting a flow sensor to said duct, and mounting an isolation valve to said duct to selectively block the flow of air between said duct and said flow controller; and installing said assembled flow control unit in a ventilation system.

54. (new) A method of installing a ventilation flow control unit according to Claim 53, wherein said step of assembling said flow control unit further includes mounting a flow straightener to said duct adjacent said flow sensor.

55. (new) A method of installing a ventilation flow control unit according to Claim 22, wherein said step of mounting an automatic valve in said fluid line includes mounting a protective bracket around said automatic valve.

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56. (new) A method of installing a ventilation flow control unit according to Claim 22, wherein said step of assembling said flow control unit further includes mounting a flow straightener to said duct adjacent said flow sensor.

57. (new) A method of installing a ventilation flow control unit according to Claim 26, wherein said step of assembling said flow control unit further includes mounting a flow straightener to said duct adjacent said flow sensor.

58. (new) A method of installing a ventilation flow control unit according to Claim 28, wherein said step of assembling said flow control unit includes mounting an electrical disconnect to said duct.

59. (new) A method of installing a ventilation flow control unit according to Claim 28, wherein said step of assembling said flow control unit further includes mounting a flow straightener to said duct adjacent said flow sensor.